

NJD002325074

13B3



June 29, 2001

Mr. Frank Faranca
Case Manager
NJDEP
Division of Responsible Party Site Remediation
Bureau of Federal Case Management
CN 028
Trenton, NJ 08625-0028

RE: NJPDES-DGW Permit 0086487 Effective March 1, 2000

Dear Mr. Faranca:

Two copies of the Discharge to Groundwater Report consisting of one (1) T-VWX-014, seven (7) VWX-015 Groundwater Analysis – Monitoring Well reports and report Sections 1.0 through 7.0 for the April through June 2001 quarter are enclosed.

Detection Monitoring was performed in accordance with Part 4-DGW Table 2, using the Ground Water Sampling and Analysis Plan approved in April 1996.

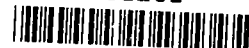
Lenox inspection logs were reviewed and a summary of the logs for the quarter is enclosed.

The "Mann-Whitney U-Test" statistical analysis of the ground water TCE results from the five (5) sentinel wells over the eight (8) sampling quarters ending October 1999 was rolled forward six quarters to cover the April 2001 data and is included in section 7 of the report. The null-hypothesis is accepted for sentinel wells MW-76, MW-77, MW-78 and MW-79A and we cannot conclude that the TCE concentrations are decreasing for the sixth quarter's data set. However, these wells do not demonstrate an order of magnitude increase. In addition, the null hypothesis was not accepted for MW-75 and we can conclude that concentrations decreased over the second year.

The **bold** data in the tables denotes elevated results, which exceed the site-specific GWQC's for lead (10ug/l) and zinc (36.7 ug/l) as determined by calculating their arithmetic means from data reported in a 3-year study. Trichloroethylene levels are compared to the New Jersey limit of 1.0 ppb. Please note:

- MW-3 continues to show elevated lead and zinc, as has been historically noted;
- MW-3, MW-72, MW-73 and MW-74 showed slightly elevated total lead this quarter, as has been historically noted. Note that MW-72, MW-73 and MW-74 were less than the laboratory detection limit for dissolved total lead this quarter;

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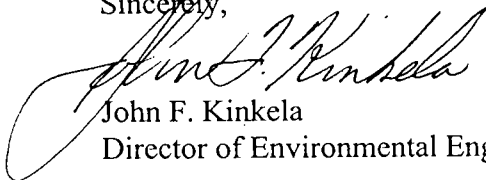
Mr. Frank Faranca
June 29, 2001
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Re: NJPDES-DGW Permit 0086487 Effective March 1, 2000

- B-31, MW-3, MW-4, MW-15, MW-17, MW-25, MW-73 and MW-74, showed elevated levels of zinc, as has been historically noted;
- Of the twenty-two (22) wells sampled for TCE this quarter, ten (10) were somewhat higher than the last quarterly or annual samples, MW-12D, MW-13, MW-15, MW-23, B-31, B-32, B-54, B-66, MW-79, and MW-81. Six (6) wells decreased MW-10, MW-12S, MW-25, B-71, MW-76, and MW-78.
- TCE was elevated in two (2) of the five (5) downgradient sentinel wells, MW-77 and MW-79A. Two (2) sentinel wells, MW-76, and MW-78 showed a decrease. Well MW-75 continues to be non-detect. This quarter's results continue to indicate that the levels are stabilizing or starting to decrease and thus may return to normal levels during the next several rounds;
- The Monthly Daily Average Flows for the quarter were 323,000 gallons per day for March, 319,000 gallons per day for April and. 360,000 gallons per day for May;
- Filtered GAC Treatment System influent samples were non-detect for zinc. The unfiltered mid and effluent water samples contained elevated zinc levels (at 50, and 90 ug/l respectively). The filtered mid and effluent samples contained elevated zinc (at 20, and 70 ug/l respectively). The zinc is attributed to the higher zinc levels previously observed in B-31 and other wells. The absence of zinc in the influent samples appears to indicate that zinc may be an intermittent parameter.
- The GAC Treatment System unfiltered influent, mid and effluent samples contained slightly elevated total lead (at 14, 12 and 13 ug/l respectively). Lead was detected, below background levels, in the unfiltered influent, mid and effluent samples (at 9, 7 and 4 ug/l respectively). Perhaps the lead levels will also be intermittent.;
- The volatile organic compound cis-1,2-dichloroethene was detected in four (4) of the twenty-two (22) monitoring wells sampled for VOC's, wells MW-10, MW-23, MW-32 and MW-79A (ranging from 1.1 to 1.4 ug/L). No other TCE daughter species were detected.
- The GAC treatment system mid sample showed TCE breakthrough at 0.6 ug/L. The lead column is scheduled to be rebedded on July 11, 2001

Please call (609) 965-8272 if there are any questions.

Sincerely,



John F. Kinkela
Director of Environmental Engineering

Enclosures -Pomona DGW and TCE Quarterly Groundwater Monitoring Report – April 2001
Monitoring Round
-Summary of Inspection Logs – April through June 2001 Quarter

bcc: J.H. Ennis (w/attachments)
L.A. Fantin, Lenox (w/attachments)
~~Andrew Park~~ (w/attachments)
File

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Form T-VWX-14

MONITORING REPORT - TRANSMITTAL SHEET

NJPDES No.

0086487

REPORTING PERIOD

MO YR MO YR

0401 thru 0601

PERMITEE: Name LENOX INCORPORATED
Address 100 LENOX DRIVE
LAWRENCEVILLE, NEW JERSEY 08648

FACILITY: Name LENOX CHINA, A DIVISION OF LENOX INCORPORATED
Address TILTON ROAD
POMONA, NEW JERSEY 08240 (County) ATLANTIC
Telephone (609) 965-8272

FORMS ATTACHED (Indicate Quantity of Each)

SLUDGE REPORTS - SANITARY

☐ T-VWX-007 ☐ T-VWX-008 ☐ T-VWX-009

SLUDGE REPORTS - INDUSTRIAL

☐ T-VWX-010A ☐ T-VWX-010B

WASTEWATER REPORTS

☐ T-VWX-011 ☐ T-VWX-012 ☐ T-VWX-013A

GROUNDWATER REPORTS (As per permit)

☒ VWX-015 ☐ VWX-016 ☐ VWX-017

NJPDES DISCHARGE MONITORING REPORT

☐ EPA FORM 3320-01

OPERATING EXCEPTIONS

YES NO

DYE TESTING ☐ ☐

TEMPORARY BYPASSING ☐ ☐

DISINFECTION INTERRUPTION ☐ ☐

MONITORING MALFUNCTIONS ☐ ☐

UNITS OUT OF OPERATION ☐ ☐

OTHER ☐ ☐

(Detail any "yes" on reverse side
in appropriate space.)

AUTHENTICATION - I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

LICENSED OPERATOR

Name _____

Grade & Registry No. _____

Signature _____

PRINCIPAL EXECUTIVE OFFICER or
DULY AUTHORIZED REPRESENTATIVE

Name JOHN F. KINKELA

Title DIR. OF ENVIRONMENTAL ENGINEERING

Signature 

LENOX CHINA
A DIVISION OF LENOX, INC.
POMONA, NEW JERSEY

POMONA DGW AND TCE
QUARTERLY GROUNDWATER MONITORING REPORT
APRIL 2001 MONITORING ROUND

PROJECT #35221.001
JUNE 2001

Office Location:

GANNETT FLEMING
202 Wall Street
Princeton, New Jersey 08540

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APPENDICES

APPENDIX A - GROUNDWATER SAMPLING LOGS

APPENDIX B - GROUNDWATER CONTOUR MAP REPORTING FORM

APPENDIX C - LABORATORY DATA REPORTS (Bound Separately)

1.0 INTRODUCTION

This report summarizes the results from the groundwater monitoring programs that satisfy the requirements outlined in Lenox's NJPDES Discharge to Groundwater (DGW) Permit (permit number NJ0086487) and the Memorandum of Agreement (MOA) between Lenox and NJDEP. All groundwater monitoring and analytical procedures were conducted in accordance with the protocols outlined in the most recently revised Groundwater Sampling and Analysis Plan (GWSAP) and Supplemental Groundwater Sampling and Analysis Plan (SGWSAP) approved by NJDEP.

This report presents the DGW and MOA sampling program data in a single document. The report components are as follows:

- Detection Monitoring Program
- GAC Treatment System Monitoring Program
- Depth to Water and Water Level Elevation Measurements
- TCE Monitoring Program
- SWMU No. 2 and Area of Concern Monitoring Program
- Classification Exception Area/Statistical Analysis Program

The first three items satisfy the DGW permit monitoring requirements with the remaining items addressed by the MOA.

2.0 DETECTION MONITORING PROGRAM (DGW)

The detection monitoring program is covered by the GWSAP and consists of the following:

- Sampling monitoring wells MW-1, MW-3, MW-4, MW-6, MW-9, and MW-10.
- Analyzing the samples for color and total and dissolved lead and zinc. Samples from MW-1 and MW-10 were also analyzed for total and dissolved iron, total dissolved solids (TDS) and total suspended solids (TSS). The parameters pH, specific conductivity and dissolved oxygen are measured in the field at the time the samples are collected.

The groundwater analytical data are summarized in Tables 1 through 7, Section 2. The laboratory data reports are included in Appendix C.

The April 2001 quarterly detection monitoring results are summarized below:

- Lead concentrations in the filtered samples ranged from less than the laboratory reporting limit of $3.0 \mu\text{g/l}$ to $18 \mu\text{g/l}$, with the highest concentration in the sample from well MW-3. Lead concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of $3.0 \mu\text{g/l}$ to $24.8 \mu\text{g/l}$, with the highest concentration in the sample from MW-3.
- Zinc concentrations in the filtered samples ranged from less than the laboratory reporting limit of $20.0 \mu\text{g/l}$ to $2,380 \mu\text{g/l}$, with the highest concentration in the sample from well MW-3. Zinc concentrations in the unfiltered samples ranged from less than the laboratory

reporting limit of 20.0 $\mu\text{g/l}$ to 2,330 $\mu\text{g/l}$, with the highest concentration in the sample from MW-3.

- Iron was not found in the filtered samples from MW-1 and MW-10 at concentrations exceeding the 100 $\mu\text{g/l}$ laboratory reporting limit. Iron concentrations in the unfiltered samples from MW-1 and MW-10 were 6,090 $\mu\text{g/l}$ and less than the laboratory reporting limit of 100 $\mu\text{g/l}$, respectively.
- TDS concentrations in the samples from MW-1 and MW-10 were 89 mg/l and 196 mg/l, respectively. TSS concentration in the sample from MW-1 was 7 mg/l. TSS was not found in the sample from MW-10 at a concentration exceeding the 4 mg/l laboratory reporting limit.
- Color concentrations ranged from less than 5 to 35 CU units, with the highest concentration found in the sample from well MW-1.

3.0 GAC TREATMENT SYSTEM MONITORING PROGRAM (DGW)

Groundwater samples from the GAC unit influent, effluent, and mid-point sampling ports are analyzed for TCE and its breakdown products (1,1-DCE, cis/trans 1,2-DCE and vinyl chloride); total and dissolved iron, lead, and zinc; and TDS and TSS. The analytical results are summarized in Table 1 Section 3.

The April 2001 GAC monitoring are summarized below:

- The GAC influent sample contained TCE at 14 $\mu\text{g/l}$ and the mid-point sample contained TCE at 0.60 $\mu\text{g/l}$. TCE was not found in the effluent sample at a concentration greater than the 0.49 $\mu\text{g/l}$ laboratory reporting limit. Cis-1,2-dichloroethene, 1,1-dichloroethene, trans-1,2-dichloroethene and vinyl chloride were not detected in the influent, mid-point, or effluent samples at concentrations greater than the laboratory reporting limits.
- Lead concentrations in the unfiltered influent, mid-point and effluent samples were 14 $\mu\text{g/l}$, 12 $\mu\text{g/l}$ and 13 $\mu\text{g/l}$, respectively. Lead concentrations in the filtered influent, mid-point and effluent samples were 9 $\mu\text{g/l}$, 7 $\mu\text{g/l}$ and 4 $\mu\text{g/l}$, respectively.
- Zinc was not found in the filtered or unfiltered influent samples at concentrations exceeding the 20 $\mu\text{g/l}$ laboratory reporting limit. Zinc was found in the unfiltered mid-point and effluent samples at 50 $\mu\text{g/l}$ and 90 $\mu\text{g/l}$, and in the filtered mid-point and effluent samples at 20 $\mu\text{g/l}$ and 70 $\mu\text{g/l}$.

- Iron concentrations in the unfiltered influent, mid-point, and effluent samples were 120 $\mu\text{g/l}$, 280 $\mu\text{g/l}$ and 150 $\mu\text{g/l}$, respectively. Iron concentrations in the filtered influent, mid-point, and effluent samples were 20 $\mu\text{g/l}$, 60 $\mu\text{g/l}$ and 130 $\mu\text{g/l}$, respectively.
- TDS concentrations in the influent, mid-point, and effluent samples were 92 mg/l, 98 mg/l and 100 mg/l, respectively.
- TSS concentrations were less than the laboratory reporting limit in all samples.

4.0 DEPTH TO WATER, WATER LEVEL ELEVATIONS, AND TREATMENT SYSTEM FLOW MONITORING (DGW)

4.1 Depth to Water and Water Level Elevations

The April 16, 2001 water level elevation data are summarized in Table 1 Section 4. Depth to water in the shallow wells on the south and north sides of the plant that screen the same interval as the recovery wells were used to develop the water level elevation and groundwater flow map (Figure 1). The groundwater flow direction is northeast, which is consistent with previous measurements.

The April 16 depth to water measurements in the well points installed downgradient of the recovery wells were plotted to develop the water level elevation and groundwater flow direction maps shown on Figures 3 and 4.

4.2 Treatment System Flow Monitoring

In an April 18, 2000 letter to Lenox, NJDEP requested that Lenox propose an "Average Daily Volume" (ADV) that establishes the minimum pumping volume to adequately capture the TCE plume. The ADV would be calculated by dividing the total volume of groundwater extracted by the recovery system each month by the number of days in the month and reported quarterly to NJDEP. Lenox proposed in a May 19, 2000 letter to NJDEP an ADV of 268,000 gallons per day, which was based on the results of groundwater modeling and the empirical water level and groundwater chemistry data developed since the recovery system started in 1991.

During the period March 1 through March 31, 2001 the calculated ADV was 323,000 gallons per day. During the period April 1 through April 30, the calculated ADV was 319,000 gallons per day. During the period May 1 through May 31, the calculated ADV was 360,000 gallons per day.

5.0 TCE MONITORING PROGRAM (MOA)

5.1 Background

A groundwater investigation performed at the Lenox China facility between January 1987 and February 1990 by Geraghty & Miller (G&M) identified two TCE plumes emanating from an antecedent drum storage pad and degreaser sump. Both antecedent waste handling areas are no longer in use. A second on-site degreaser sump was removed from service in June 1993. Lenox initiated a quarterly groundwater monitoring program to delineate and track the TCE plumes identified by G&M. The monitoring results were also used to design the GWCAS.

5.2 Field Procedures

Groundwater samples were collected from 15 monitoring wells at the Lenox facility and along White Horse Pike on April 16-18, 2001. All sampling was performed in accordance with the most recently revised (April 1996) Groundwater Sampling and Analysis Plan and Supplemental Groundwater Sampling, Analysis, and Monitoring Plan approved by the NJDEP.

Lenox installed a 3/4 inch I.D. pump column attached to a one foot section of well screen in each well used to monitor the TCE remediation system prior to the May 1993 sampling round. The bottom of the pump column screen was set approximately two feet above the top of the well screen to ensure that the total volume of standing water in the well casing was removed during purging. A peristaltic pump was attached to the top of the pump column using drinking water grade polyethylene tubing to purge each well. Three to five times the volume of standing water in each well were removed and field parameters (pH, specific conductivity, temperature, and dissolved oxygen) were monitored during the purging process. The field parameter data are shown on the well sampling logs in Appendix A. Samples for metals analysis

were collected directly from the discharge of the peristaltic pump. New drinking water grade polyethylene tubing was used to purge and sample each well to avoid cross-contamination. Samples for VOC analysis were collected with 60 cc Teflon bailers dedicated to each well.

Unfiltered samples were analyzed for VOCs (USEPA Method 502.2), iron, zinc, lead, TDS and TSS. Filtered samples were analyzed for iron, zinc, and lead. Field blank and duplicate samples were collected during the monitoring program and trip blanks supplied by the laboratory were analyzed for quality assurance purposes. All analyses were performed by Accutest, Dayton, New Jersey (NJDEP Certification No. 12129).

5.3 Groundwater Monitoring Results

The groundwater analytical data are summarized in Tables 1, 2, 3 and 4, Section 5 and the extent of TCE in groundwater during the April 2001 monitoring round is shown on Figure 2. The laboratory data reports are included in Appendix C.

The April 2001 monitoring round results are summarized below:

- TCE concentrations increased at monitoring wells MW-13, MW-15, B-31, MW-79A and MW-81 since the last quarterly monitoring round. The largest increase occurred at B-31 (9.1 $\mu\text{g/l}$ to 15.4 $\mu\text{g/l}$). With respect to the monitoring wells sampled annually, TCE concentrations increased at wells MW-12D, MW-23, B-32, B-54 and B-66. The largest increase in TCE concentrations occurred at MW-23 (9.5 $\mu\text{g/l}$ to 110 $\mu\text{g/l}$).

- TCE concentrations decreased at monitoring wells MW-10, MW-12S, MW-25, B-59, MW-76 and MW-78 since the last quarterly monitoring round. The largest decrease occurred at MW-25 (28.8 $\mu\text{g/l}$ to 22.9 $\mu\text{g/l}$). With respect to the monitoring wells sampled annually, TCE concentrations decreased at wells B-53 and B-71. The largest decrease occurred at B-71 (9.1 $\mu\text{g/l}$ to 1.9 $\mu\text{g/l}$).
- TCE concentrations remained unchanged at less than the laboratory reporting limit at wells MW-1, MW-75 and MW-80 and at 2.8 $\mu\text{g/l}$ at well MW-77.
- Cis 1,2-dichloroethene was detected in the samples from well MW-10, MW-23, B-32 and MW-79A at concentrations ranging from 1.1 $\mu\text{g/l}$ to 1.4 $\mu\text{g/l}$, with the highest concentration found in the samples from wells MW-10 and B-32. No other TCE breakdown products were found in the samples from these or the remaining wells at concentrations exceeding the laboratory reporting limits.
- Iron concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 0.1 mg/l to 6.090 mg/l, with the highest concentration in the sample from well MW-1. Except for the sample from MW-79A, iron was not found in the filtered samples at a concentration exceeding the 0.1 mg/l laboratory reporting limit. The MW-79A sample contained iron at 0.117 mg/l.
- Lead concentrations in unfiltered samples ranged from less than the laboratory reporting limit of 0.003 mg/l to 0.0065 mg/l, with the highest concentration in the sample from well MW-23. Lead concentrations in filtered samples ranged from less than the laboratory reporting limit of 0.003 mg/l to 0.0046, with the highest concentration in the sample from MW-23.

- Zinc concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 0.02 mg/l to 0.209 mg/l, with the highest concentration in the sample was from MW-15. In the filtered samples, zinc concentrations ranged from less than the laboratory reporting limit of 0.02 mg/l to 0.223 mg/l, with the highest concentration in the sample from well MW-15.
- TDS concentrations ranged from 14 mg/l to 545 mg/l, and TSS concentrations ranged from less than the laboratory reporting limit of 4 mg/l to 20 mg/l. The highest TDS and TSS concentrations were in the samples from wells MW-12D and B-71, respectively.
- There was good agreement between analyte concentrations in the field and duplicate samples from monitoring well MW-75. Iron, lead, zinc, TDS and TSS were not detected in the field blank samples at concentrations exceeding laboratory reporting limits. Methylene chloride was detected in the field blank sample collected on April 18 (FB-2) at 1.6 µg/l. A trip blank was inadvertently omitted from the sample delivery group provided to the laboratory on April 18.

The monitoring data indicate that TCE concentrations in samples from the sentinel wells along White Horse Pike increased at well MW-79A, decreased at wells MW-76 and MW-78, remained unchanged at 2.8 µg/l at well MW-77, and remained at less than the laboratory detection limit at MW-75 since the last monitoring round. TCE concentrations exceeded the NJDEP 1 µg/l groundwater standard in the samples from wells MW-77 (2.8 µg/l) and MW-79A (2.8 µg/l).

**LENOX CHINA FACILITY AND ADJACENT AREA
POMONA, NEW JERSEY**

TABLE 1 SECTION 5

SUMMARY OF TRICHLOROETHENE CONCENTRATIONS IN GROUNDWATER

Well	April 16-18, 2001
MW1	< 0.30
MW3	-
MW6	-
MW9	-
MW10	16.70
MW11	-
MW12S	1.50
MW12D	5.30
MW13	0.63
MW14S	-
MW14D	-
MW15	1.90
MW16	-
MW17	-
MW23	110.00
MW23A	-
MW24	-
MW25	22.90
MW25A	-
MW25B	-
B30 (MW26)	-
B30A (MW26A)	-
B30B (MW26B)	-
B31 (MW27)	15.40
B32 (MW28)	14.40
B33 (MW29)	-
B52	-
B53	1.00
B54	195.00
B55	-
B56	-
B57	-
B58	-
B59	4.60
B65	-
B66	28.90
B66A	-
B66B	-
B67	-
B68	-
B69	-
B70	-
B70A	-
B71	1.90
MW72	-
MW73	-
MW74	-
MW75	< 0.30
MW76	0.46
MW77	2.00
MW78	0.97
MW79A	2.00
MW80	< 0.30
MW81	1.20
P18	-
P19	-
P20	-
P21	-
P22	-
RW1	-
GAC Influent	14.00
GAC Effluent	0.60
GAC Mid-Vessel	< 0.49

Notes:

All samples analyzed by USEPA Method 624, 601 or 502.2/524.2.

All concentrations are presented in micrograms per liter (ug/L).

- Not analyzed (well not installed in some cases).

Values in **bold font** exceed the site specific Groundwater Quality Criteria (GWQC).

TABLE 1 Continued...

Well	July 12-13, 1999	October 18-19, 1999	January 18-19, 2000	April 10-11, 2000	July 10-12, 2000	October 16-17, 2000	January 22-24, 2001
MW1	<0.20	<0.20	<0.20	<0.20	<0.27	<0.27	<0.30
MW3	-	-	-	-	-	-	-
MW6	-	-	-	-	-	-	-
MW9	-	-	-	-	-	-	-
MW10	10.6/10.3	11.4/14.2	9.4/10.4	7.1/7.2	7.7/8	5.2	11.5
MW11	-	-	-	-	-	-	-
MW12S	1.10	1.8	1.7	1.8	1.7	1.5	1.7
MW12D	-	-	-	4.1	-	-	-
MW13	0.73	1.2/1.3	0.95	0.89	0.76	0.57	0.34
MW14S	-	-	-	-	-	-	-
MW14D	-	-	-	-	-	-	-
MW15	3.40	2.9	2.8	<0.20	1.3	1.4	1.8
MW16	-	-	-	-	-	-	-
MW17	-	-	-	-	-	-	-
MW23	-	-	-	9.5	-	-	-
MW23A	-	-	-	-	-	-	-
MW24	-	-	-	-	-	-	-
MW25	14.30	17.40	17.30	15.60	20.50	29.70	28.8
MW25A	-	-	-	-	-	-	-
MW25B	-	-	-	-	-	-	-
B30 (MW26)	-	-	-	-	-	-	-
B30A (MW26A)	-	-	-	-	-	-	-
B30B (MW26B)	-	-	-	-	-	-	-
B31 (MW27)	9.20	15.2	8.8	7.9	6.3	5.1	9.1
B32 (MW28)	-	-	-	13.3	-	-	-
B33 (MW29)	-	-	-	-	-	-	-
B52	-	-	-	-	-	-	-
B53	-	-	-	7.8	-	-	-
B54	-	-	-	106.0	-	-	-
B55	-	-	-	-	-	-	-
B56	-	-	-	-	-	-	-
B57	-	-	-	-	-	-	-
B58	-	-	-	-	-	-	-
B59	<0.20	13.1	18	22.8	10.2	5.3	5.2
B65	-	-	-	-	-	-	-
B66	-	-	-	24.4	-	-	-
B66A	-	-	-	-	-	-	-
B66B	-	-	-	-	-	-	-
B67	-	-	-	-	-	-	-
B68	-	-	-	-	-	-	-
B69	-	-	-	-	-	-	-
B70	-	-	-	-	-	-	-
B70A	-	-	-	-	-	-	-
B71	-	-	-	9.1	-	-	-
MW72	-	-	-	-	-	-	-
MW73	-	-	-	-	-	-	-
MW74	-	-	-	-	-	-	-
MW75	<0.20<0.20	<0.20	<0.20	<0.20	<0.27	<0.27	<0.30
MW76	0.37	0.58	0.57	0.43	<0.27	<0.27	0.50
MW77	2.60	3.30	2.60	2.30	3.00	2.80	2.8
MW78	0.60	0.82	1.10	0.74	0.63	0.91	1.20
MW79A	1.40	2.10	1.50	1.30	1.80	2.60	1.0
MW80	<0.20	<0.20	<0.20	<0.20	<0.27	<0.27	<0.30
MW81	2.20	2.40	1.7/2.0	1.20	0.52	<0.27	1.1
P18	-	-	-	-	-	-	-
P19	-	-	-	-	-	-	-
P20	-	-	-	-	-	-	-
P21	-	-	-	-	-	-	-
P22	-	-	-	-	-	-	-
RW1	-	-	-	-	-	-	-
GAC Influent	31.00	25	25	26	19	17	3.58
GAC Effluent	<0.32	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28
GAC Mid-Vessel	<0.32	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28

Notes:

All samples analyzed by USEPA Method 624, 601 or 502 2/524.2.

All concentrations are presented in micrograms per liter (ug/L).

- Not analyzed (well not installed in some cases).

Values in bold font exceed the site specific Groundwater Quality Criteria (GWQC).

TABLE 1 Continued . . .

Well	October 20-21, 1997	January 19-21, 1998	April 13-16, 1998	July 6-9, 1998	October 5-8, 1998	January 11-13, 1999	April 12-14, 1999
MW1	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
MW3	-	-	-	-	-	-	-
MW6	-	-	-	-	-	-	-
MW9	-	-	-	-	-	-	-
MW10	10.3/7.5	23	31.0	20.9	10.3	24.8	8.3
MW11	-	-	-	-	-	-	-
MW12S	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	1.2
MW12D	-	-	0.32	-	-	-	2.9
MW13	0.87	0.66	0.44	0.37	< 0.20	0.38/0.36	1.1
MW14S	-	-	-	-	-	-	-
MW14D	-	-	-	-	-	-	-
MW15	2.00	3.4	0.72/0.80	0.62	1.4	3.3	3.7
MW16	-	-	-	-	-	-	-
MW17	-	-	-	-	-	-	-
MW23	-	-	8.0	-	-	-	-
MW23A	-	-	-	-	-	-	17.3
MW24	-	-	-	-	-	-	-
MW25	0.44	0.77	-	17.4	5.7	13.6	15.4
MW25A	-	-	-	-	-	-	-
MW25B	-	-	-	-	-	-	-
B30 (MW26)	-	-	-	-	-	-	-
B30A (MW26A)	-	-	-	-	-	-	-
B30B (MW26B)	-	-	-	-	-	-	-
B31 (MW27)	32.70	23.1	11.7	3.8	6.9	6.5	20.3
B32 (MW28)	-	-	8.2	-	-	-	12.5
B33 (MW29)	-	-	-	-	-	-	-
B52	-	-	-	-	-	-	-
B53	-	-	-	-	-	-	-
B54	-	-	-	-	-	-	7.8
B55	-	-	-	-	-	-	222.0
B56	-	-	-	-	-	-	-
B57	-	-	-	-	-	-	-
B58	-	-	-	-	-	-	-
B59	44.30	58.4/60	-	26.1	22.8	12.4	16.9
B65	-	-	-	-	-	-	-
B66	-	-	97.4	-	-	-	34.1
B66A	-	-	-	-	-	-	-
B66B	-	-	-	-	-	-	-
B67	-	-	-	-	-	-	-
B68	-	-	-	-	-	-	-
B69	-	-	-	-	-	-	-
B70	-	-	-	-	-	-	-
B70A	-	-	-	-	-	-	-
B71	-	-	3.2	-	-	-	3.8
MW72	-	-	-	-	-	-	-
MW73	-	-	-	-	-	-	-
MW74	-	-	-	-	-	-	-
MW75	0.87	0.90	0.95	1.1	0.32	0.22	0.76
MW76	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	0.20	0.26
MW77	0.84	0.39	< 0.20	0.23	0.42	0.54	2.0
MW78	0.26	0.50	0.23	< 0.20	0.24	0.34	0.34
MW79A	0.51	0.37	0.23	0.40	0.22	0.23	1.0
MW80	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
MW81	0.30	0.59	0.47	0.34	0.32	0.31	2.1
P18	-	-	-	-	-	-	-
P19	-	-	-	-	-	-	-
P20	-	-	-	-	-	-	-
P21	-	-	-	-	-	-	-
P22	-	-	-	-	-	-	-
RW1	-	-	-	-	-	-	-
GAC Influent	17.70	18.6	24.8	20.0	21.0	31.0	37.0
GAC Effluent	< 0.2	< 0.2	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
GAC Mid-Vessel	0.21	1.2	< 0.32	< 0.32	< 0.32	< 0.32	0.94

Notes:

All samples analyzed by USEPA Method 624, 601 or 502.2/524.2

All concentrations are presented in micrograms per liter (ug/L)

- Not analyzed (well not installed in some cases)

Values in bold font exceed the site specific Groundwater Quality Criteria (GWQC)

Notes:

< = Less Than

6.0 SWMU No. 2 AND AREA OF CONCERN MONITORING PROGRAM (MOA)

6.1 Groundwater Monitoring Results

The groundwater sampling data from monitoring wells MW-10, MW-17, MW-72, MW-73 and MW-74 are used to assess groundwater quality downgradient of Solid Waste Management Unit (SWMU) No. 2 and the Area of Concern (AOC). Unfiltered and filtered samples from these wells were analyzed for lead and zinc. The groundwater analytical data are summarized in Table 1 Section 6. The laboratory data reports are included in Appendix C.

The April 2001 monitoring round results for SWMU No. 2 and AOC are summarized below:

- Lead concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 0.003 mg/l to 0.0436 mg/l (MW-73). Lead was not found in the filtered samples at a concentration exceeding the 0.003 mg/l.
- Zinc concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 0.02 mg/l to 0.0825 mg/l (MW-17). In the filtered samples, zinc concentrations ranged from less than the laboratory reporting limit of 0.02 mg/l to 0.0822 mg/l (MW-17).

7.0 CLASSIFICATION EXCEPTION AREA / STATISTICAL ANALYSIS PROGRAM

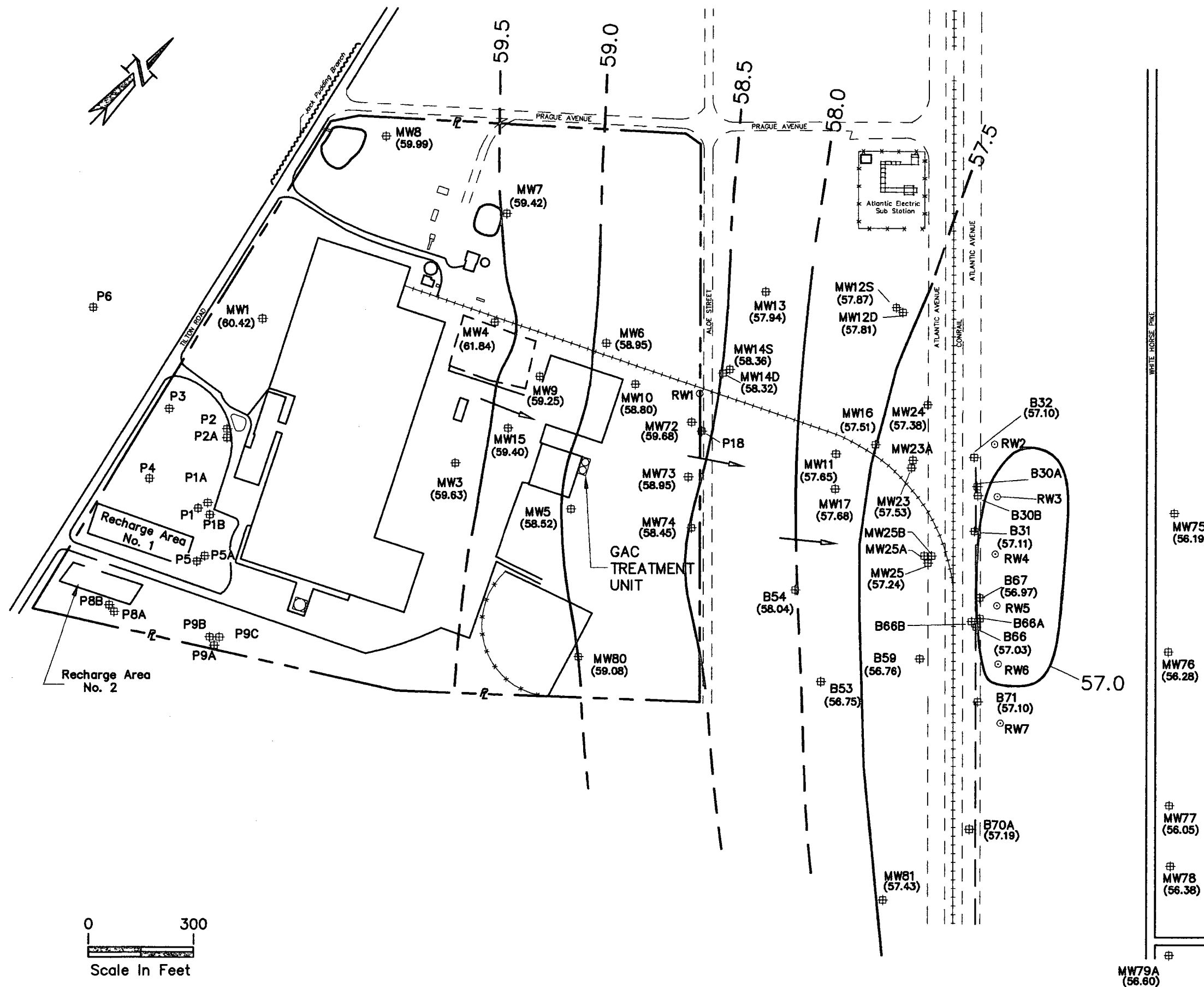
(MOA)

The groundwater sampling data from MW-1, MW-3F, MW-6F, MW-12S, MW-13, MW-73, MW-74, MW-75, MW-79A are used to assess groundwater quality downgradient of the Lenox facility. Unfiltered and filtered samples from these wells were analyzed for lead and zinc. The groundwater analytical results are summarized in Table 1 Section 7. The laboratory data reports are included in Appendix C.

The April 2001 monitoring round results for the CEA/Statistical Analysis Program are summarized below:

- Lead concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 0.003 mg/l to 0.0436 mg/l (MW-73). Lead was not found in any of the filtered samples at a concentration exceeding the 0.003 mg/l laboratory reporting limit.
- Zinc concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 0.02 mg/l to 0.0736 mg/l, with the highest concentration in the sample from MW-73. Zinc concentrations in the filtered samples ranged from less than the laboratory reporting limit of 0.02 to 0.0385 mg/l (MW-74).
- TCE concentrations, as summarized in Table 1 Section 5, ranged from less than the laboratory reporting limit of 0.30 µg/l to 195 µg/l, with the highest concentration in the sample from well B-54. TCE concentrations in the sentinel wells along White Horse Pike ranged from less than the 0.30 µg/l laboratory reporting limit at well MW-75 to 2.80 µg/l at wells MW-77 and MW-79A.

In accordance with the CEA monitoring program, the sentinel well TCE monitoring data developed during the past eight consecutive quarters were statistically analyzed using the Mann-Whitney U Test. The results are summarized in Table 2 Section 7. The null hypothesis, defined as the population means of the current and previous year data set are the same, was accepted at the 90 percent confidence level at wells MW-76, MW-77, MW-78 and MW-79A, indicating that TCE concentrations at these wells have statistically remained the same or increased over the monitoring periods ending January and April 2001.



LEGEND

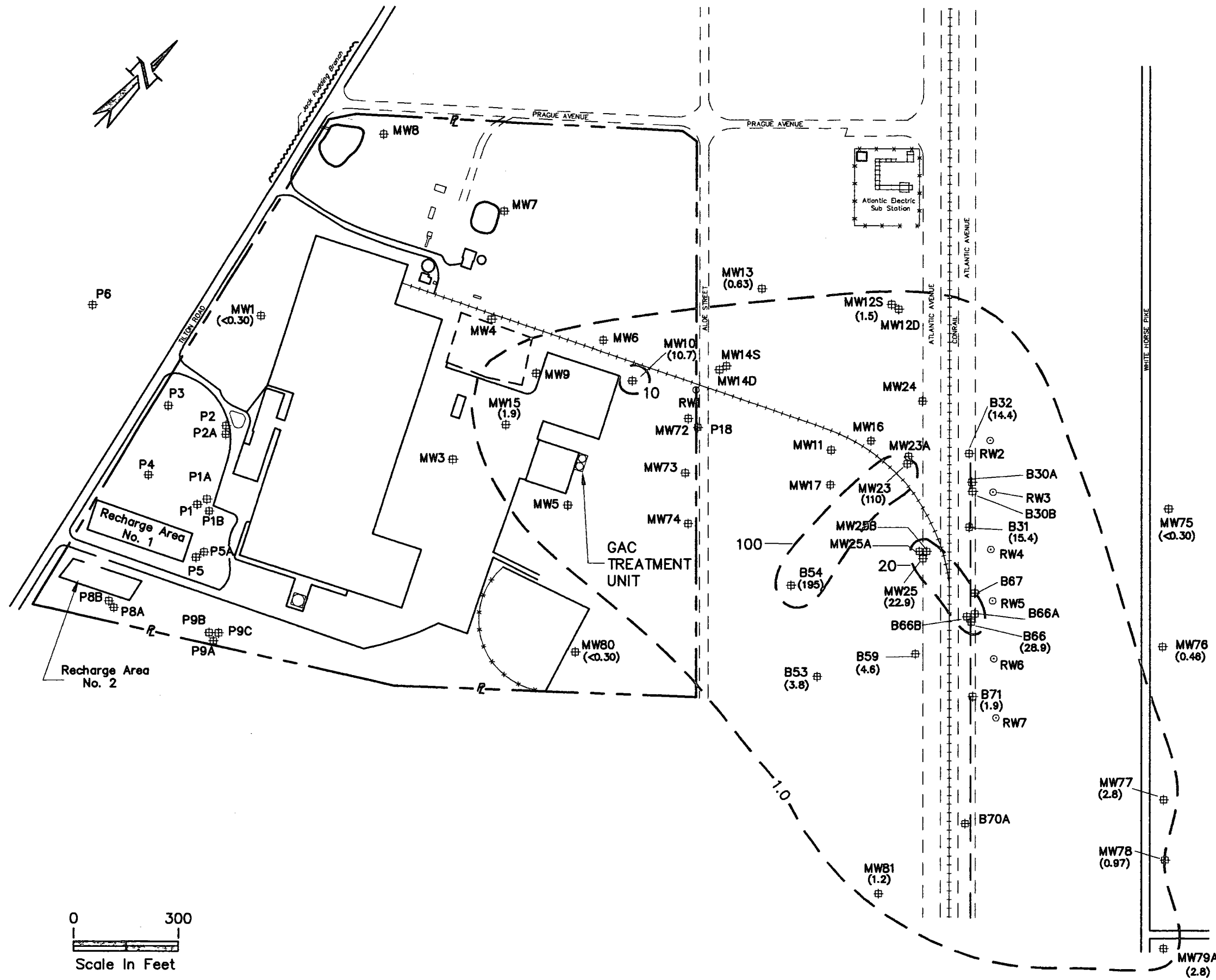
- B66 (57.03) # Location Of Monitoring Well With Groundwater Elevation
- RW5 ○ Location Of Recovery Well
- 56.0 — Line Of Equal Water Level Elevation In Feet Above MSL (Dashed Where Inferred)
- ← Groundwater Flow Direction

NOTE:

Base Map Obtained From Geraghty & Miller's August 1992 Groundwater Monitoring Report.

GROUNDWATER FLOW MAP
APRIL 16, 2001

LENOX CHINA
POMONA, NEW JERSEY



LEGEND

B59 # Location Of Monitoring Well
With TCE Concentration in ug/l

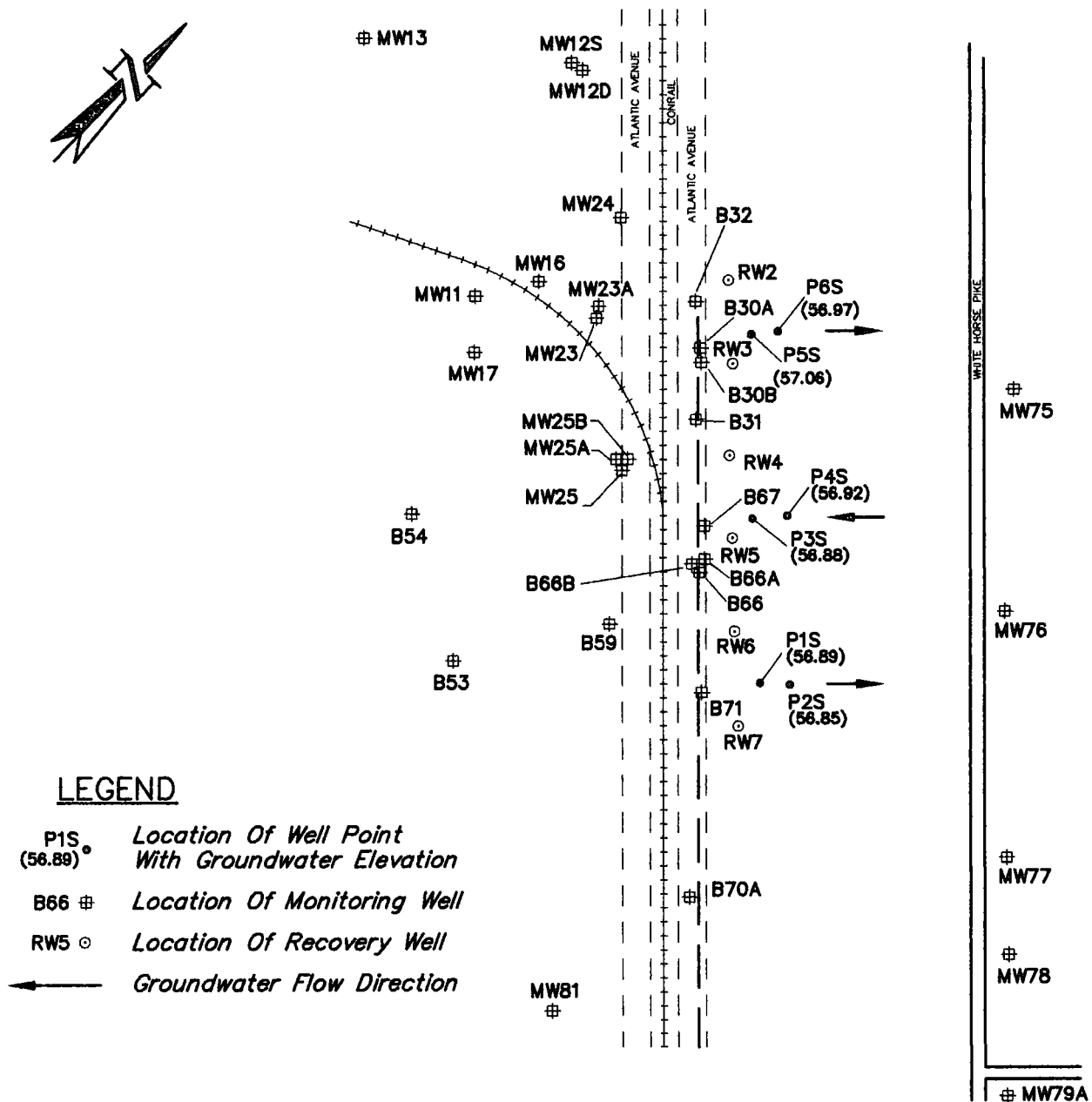
RW5 ○ Location Of Recovery Well

1.0 — Line Of Equal TCE
Concentration in ug/l
(Dashed Where Inferred)

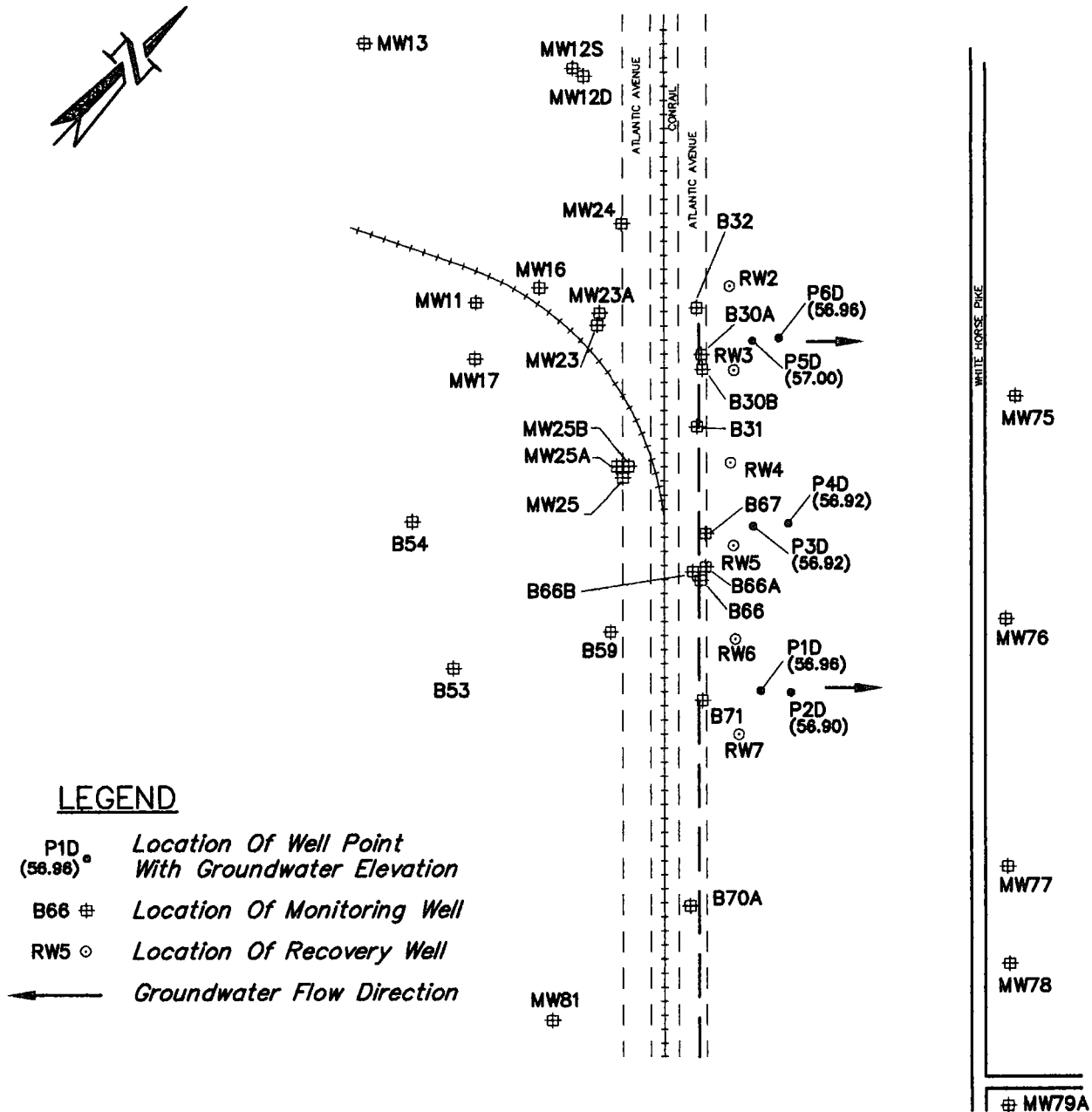
NOTE:
Base Map Obtained From
Geraghty & Miller's August 1992
Groundwater Monitoring Report.

EXTENT OF TRICHLOROETHYLENE IN GROUNDWATER APRIL 16-18, 2001

LENOX CHINA
POMONA, NEW JERSEY



GROUNDWATER FLOW MAP
SHALLOW WELLS
APRIL 16, 2001
LENOX CHINA
POMONA, NEW JERSEY



GROUNDWATER FLOW MAP
DEEP WELLS
APRIL 16, 2001
LENOX CHINA
POMONA, NEW JERSEY